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ANNUAL REPORT  
OF THE  
MONTANA  
Department of Natural Resources  
and Conservation



TO THE  
GOVERNOR OF MONTANA  
Honorable Thomas L. Judge

FOR THE  
FISCAL YEAR ENDED  
June 30, 1973

Gary J. Wicks — Director

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# MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

THOMAS L. JUDGE, GOVERNOR  
GARY WICKS, DIRECTOR

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HELENA, MONTANA 59601

October 12, 1973

The Honorable Thomas L. Judge  
Governor of the State of Montana  
State Capitol Building  
Helena, Montana 59601

Dear Governor Judge:

The Montana Department of Natural Resources and Conservation herewith submits its Annual Report for the fiscal year ending June 30, 1974, in accordance with Section 82-4002, R.C.M. 1947. As directed in Management Memo 1-73-6, the Annual Report of the Oil and Gas Conservation Division, which is attached to this Department for administrative purposes only, is included as a separate, final section.

Major accomplishments during the year include:

- \* Organizational readjustments for the administration of the Montana Utility Siting Act, the Montana Water Use Act, and the Floodplain Management and Regulation Act;
- \* Substantial financial savings with no reduction in services provided;
- \* Increased gas and oil production;
- \* Major construction work on four water development projects;
- \* Development of a multiple-use forest management plan;
- \* Publication of five studies;
- \* Development or revision of seventeen county fire plans;
- \* Increased assistance to soil and water conservation districts;
- \* Increases in both number of man-days expended and total value of projects completed at Swan River Youth Camp;



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Honorable Thomas L. Judge  
October 12, 1973  
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- \* Statewide implementation of rangeland management programs; and
- \* Approval of two grant applications by the Environmental Protection Agency for studies of acid mine drainage abatement systems.







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PRINCIPAL OFFICERS AND OFFICES  
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Term: 7/20/73 to 1/1/75

Mr. Cecil Weeding  
Box 78  
Jordan, MT 59337  
Term: 7/20/73 to 1/3/77

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

**DIRECTOR'S OFFICE**  
32 South Ewing  
Helena, MT 59601  
Director, Gary J. Wicks  
Deputy Director, Ted J. Doney

**FORESTRY DIVISION**  
2705 Spurgin Road  
Missoula, MT 59801  
Administrator, Gareth C. Moon  
Assistant Administrator,  
Robert Arnold

**CENTRALIZED SERVICES DIVISION**  
32 South Ewing  
Helena, MT 59601  
Administrator, Richard Isaacs  
Assistant Administrator, Robert M. Culver

Operations Bureau  
Chief, Robert Griffes

**CONSERVATION DISTRICTS DIVISION**  
32 South Ewing  
Helena, MT 59601

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Chief, Earl Salmonson

Grass Conservation Bureau  
Chief, Peter V. Jackson

Fire Control Bureau  
Chief, Richard Sandman

Soil Conservation Bureau  
Chief, Ole M. Ueland

Cooperative Projects Bureau  
Chief, Donald Drummond

**ENERGY PLANNING DIVISION**  
32 South Ewing  
Helena, MT 59601  
Administrator, Albert C. Tsao

**OIL & GAS CONSERVATION DIVISION**  
325 Fuller Avenue, P.O. Box 217  
Helena, MT 59601  
Administrator, Donald Chisholm



WATER RESOURCES DIVISION  
32 South Ewing  
Helena, MT 59601  
Administrator, Grant W. Buswell  
Assistant Administrator, William F. Throm

Engineering Bureau  
Chief, Orrin A. Ferris

Floodway Management Bureau  
Chief, Charles E. Parrett

Resources and Planning Bureau  
Chief, John E. Acord

Water Rights Bureau  
Chief, Harold A. Krsul







## LEGAL REFERENCES

Statutes relative to the operations of the Department of Natural Resources and Conservation are, for the most part, contained in the following sections of the 1947 Revised Codes of Montana:

Title 28	Forests and Forestry
Title 46, Chapter 23	Grass Conservation - Grazing Districts
Title 60, Chapter 1	Conservation of Oil and Gas*
Title 60, Chapter 8	Underground Gas Storage Reservoirs*
Title 70, Chapter 8	Utility Siting
Title 76, Chapter 1	Soil and Water Conservation - Conservation Districts
Title 81, Chapter 14	State Forests
Title 81, Chapter 15	Portable Sawmills on Forest Land
Title 89, Chapter 1	Water Resource Projects, Conservation, and State Water Plan
Title 89, Chapter 3	Weather Modification Activities
Title 89, Chapter 7	Dam Safety
Title 89, Chapter 8	Water Rights
Title 89, Chapter 29	Groundwater Rights Administration
Title 89, Chapter 34	Conservancy Districts

Passage by the 43rd Legislative Assembly of the Montana Water Use Act and the Montana Utility Siting Act substantially increased the responsibilities of the Department of Natural Resources and Conservation. Among the material effects of these 1973 enactments on agency operations are the following:

1. A Water Rights Bureau was established within the existing Water Resources Division, and a new Energy Planning Division was created.
2. Staff additions, primarily of highly specialized personnel, were necessitated.
3. A number of court actions have been filed, testing the new laws, evidencing the need for establishment of a legal unit, and prompting close examination of the Department's interrelated statutory obligations.

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\*Statute applicable to the Oil and Gas Conservation Division, which is attached to the Department for administrative purposes only.







## PRINCIPAL GOAL

The goal of the Department of Natural Resources and Conservation is to maintain and enhance the unique quality of life existent in Montana through the judicious execution of its many statutory responsibilities concerning Montana's land, water, forest and fossil fuel resources.



## MAJOR ACCOMPLISHMENTS

### 1. Responses to New Legislation

The 43rd Legislative Assembly's enactment or amendment of several significant laws, to be administered by the Department of Natural Resources and Conservation, led to major departmental adjustments and accomplishments.

- \* A new organizational unit was created in order for the Department to fulfill its responsibilities in administering the Montana Utility Siting Act of 1973, a measure enacted to ensure that the location, construction and operation of power and energy facilities will have minimal adverse effects on the people and the environment. This Act became effective with Governor Judge's signature on March 16, 1973, and thereafter the Division of Energy Planning was established and staffing partially completed.
- \* Preparations and staffing adjustments were made to facilitate the creation of a second new organizational unit, the Water Rights Bureau, in order for the Department to discharge its responsibilities in the administration of the Montana Water Use Act of 1973. Effective on July 1, 1973, this Act provides for court determinations of existing water rights, a permit and certificate system for new water rights, and centralization of all water rights records. Appropriate rules and regulations for the Act's implementation were formulated, presented to the Board of Natural Resources and Conservation, and adopted, and drafting of most of the requisite forms was completed.
- \* Preparations were also made to facilitate the creation of a third new organizational unit, the Floodway Management Bureau, in order for the Department to fulfill its responsibilities in administering the amended Floodway Management and Regulation Act, a measure to protect human safety and property as well as the riverine environment. Proposed rules and regulations were formulated for the regulation of development within the encroachment line of floods of 100-year frequency, and a public hearing was held thereon on June 14, 1973.

### 2. Financial Savings

Due to the economies of Executive Reorganization, the Department was able to revert approximately \$150,000 in General Fund monies at the end of Fiscal Year 1973 with no corresponding reduction in services. These economies also enabled the Department to minimize its General Fund Budget request for the 1974-1975 biennium.

### 3. Increased Gas and Oil Production

Unitization of the Bullhook area of the Tiger Ridge Gas Field in central northern Montana was approved. Thus, in December of 1972, the Northern Natural Gas Transmission Company began operation of a gas pipe line from the field which resulted in nearly doubling Montana's daily average natural gas pro-



duction. Two smaller gas fields were approved for unitization during Fiscal Year 1973.

The instigation of secondary recovery programs was approved in six fields. During Fiscal Year 1973 state-wide daily oil production increased by 1,200 barrels over that in Fiscal Year 1972. This increase is due primarily to successfully operated secondary recovery programs.

#### 4. Water Development Projects

Construction work on the Little Dry, Daly Ditches, Sidney and Columbus Projects at a total evaluation of over \$400,000 was accomplished during Fiscal Year 1973. The major portions of contracts were completed on all except the Sidney project.

#### 5. Multiple-Use Forest Management Plan

A multiple-use plan was developed for the Swan River State Forest. Incorporating the results of several years' training, expertise from various disciplines, and input from the public, this plan emphasizes forest land quality and can serve as a prototype for plans on other State-owned forest lands.

#### 6. Publications

- \* The publication, Coal Development in Eastern Montana, A Situation Report by the Montana Coal Task Force, was published under the auspices of the Department with cooperation of various State agencies and the University system.
- \* In compliance with House Resolution No.24 of the 42nd Legislature, the siltation study of the Clarks Fork of the Yellowstone River was completed in cooperation with other State and federal agencies, and A Study of Erosion and Sedimentation, Montana Portion, Clarks Fork, Yellowstone River Basin was published.
- \* Data on water and related resources was gathered, and The Madison River Basin, A Resource Review was published, illustrating the range of possible management alternatives and contributing to the State Water Plan.
- \* Critique of the Broadwater-Missouri Irrigation Project, a detailed assessment of the project's economic and physical condition, and Progress Report-Project Critiques, a critique summary describing progress toward evaluating repair needs and the economic feasibility of continued State involvement in various water development projects, were published.

#### 7. Rural Fire Protection

County fire plans, including identification of needs for fire fighting equipment, were developed or revised for 17 counties to enable the more efficient resolution of fire protection problems.







## 8. Assistance to Conservation Districts

Through performance of regularly assigned duties, services were provided to soil and water conservation districts under whose programs Montanans invested over \$13 million in land and water improvements, representing a variety of practices.

## 9. Institution Forestry Projects

3,298 man-days were expended by the students at the Swan River Youth Camp on various work projects for the Forestry Division. The value of projects completed by the Camp amounted to approximately \$49,000. This compares to 2,434 man-days expended at an estimated value of \$26,998 in Fiscal Year 1972.

## 10. Rangeland Management Programs

County Rangeland Leaders and/or Committees have been appointed and range-land management programs implemented in all 56 counties.

## 11. Grants

Two pre-feasibility reports and grant applications were submitted to the Environmental Protection Agency on proposed studies of acid mine drainage abatement systems near Hughesville and Cooke City. The Hughesville proposal was approved, the \$33,000 grant received, and preliminary work begun. Notification of approval of the Cooke City study was received.







PROGRAM COST SUMMARY

PROGRAM NAME	1972 - 1973	1971 - 1972	DIFFERENCE
Centralized Services	403,607.00	338,204.00	65,403.00
Oil and Gas Conservation	198,967.00	211,432.00	(12,465.00)
Grazing Districts	11,148.00	10,075.00	1,073.00
Conservation Districts	28,442.00	27,207.00	1,235.00
Watershed Planning	68,809.00	44,710.00	24,099.00
Rangeland Management	14,684.00	16,159.00	(1,475.00)
Water Engineering	645,217.00	1,479,194.00	(833,977.00)*
Water Resources & Planning	453,734.00	323,625.00	130,109.00 **
Forest Management	552,124.00	523,410.00	28,714.00
Fire Protection	1,309,727.00	1,340,160.00	(30,433.00)
Institution Forestry Work	38,488.00	40,021.00	(1,533.00)
Emergency Employment	210,169.00	116,591.00	93,578.00
Energy Planning	10,291.00	-0-	10,291.00
Council - Natural Resources	-0-	16,447.00	(16,447.00)
	<u>3,945,407.00</u>	<u>4,487,235.00</u>	<u>(541,828.00)</u>
Total Personal Services	2,124,678.00	1,962,419.00	162,259.00
Total Operation	1,298,084.00	1,151,814.00	146,270.00
Equipment	171,629.00	109,893.00	61,736.00
Ass't, Grants & Benefits	306,386.00	1,076,212.00	(769,826.00)*
Capital Outlay	44,630.00	186,897.00	(142,267.00)
	<u>3,945,407.00</u>	<u>4,487,235.00</u>	<u>(541,828.00)</u>
General Fund	1,931,782.00	2,057,354.00	(125,572.00)
Earmarked Rev.	710,881.00	623,299.00	87,582.00
Fed & Private Rev. Fund	996,358.00	726,875.00	269,483.00
Fed & Private Grant	306,386.00	1,076,212.00	(769,826.00)*
Agency Fund	-0-	3,495.00	(3,495.00)
	<u>3,945,407.00</u>	<u>4,487,235.00</u>	<u>(541,828.00)</u>

\* Reflects the decrease of Federal Grant monies to the Water Associations.

\*\* Reflects increase in special projects which were federally funded.



## PROGRAM DESCRIPTION

### PROGRAM -- CENTRALIZED SERVICES

#### GOAL

Provide managerial and administrative functions essential for the efficient operation of the Department.

#### OBJECTIVES

Develop effective policies and procedures for administering those State resources under the control of the Department of Natural Resources and Conservation.

Provide a uniform budget and accounting system for the Department.

Provide legal services to all Divisions.

Provide systems analysis and coordinating data processing activities for all Divisions.

Maintain a current inventory of all fixed assets.

Provide a personnel system which includes hiring procedures, employee grievance procedures and position classifications.

Provide cartographic services, thereby giving all Divisions access to the creation and use of a variety of maps, graphs, charts, lettering and artwork.

Establish a departmental library centralizing all relevant and frequently used written materials for easy access.

Design an information dissemination procedure to insure that pertinent information and data is received by all individuals needing said information.

Establish a photographs record center.

#### ACHIEVEMENTS

Due to the economies of Executive Reorganization, the Department was able to revert approximately \$150,000 in General Fund monies at the end of Fiscal Year 1973. These economies also enabled the Department to minimize its General Fund Budget request for the 1974-1975 biennium.

The publication, Coal Development in Eastern Montana, A Situation Report by the Montana Coal Task Force, was published under the auspices of the Department with the cooperation of various State agencies and the University System.



Preparations were made for the creation of the Special Staff Unit, intended to draw together individuals of various vocational disciplines for use in special assignments throughout the Department.

Computer programs were developed to project population and employment trends in counties. Information will be used in preparing the State Water Plan.



## PROGRAM DESCRIPTION

### PROGRAM -- GRAZING DISTRICT SUPERVISION

#### GOAL

Provide for the conservation, protection, restoration and proper utilization of grass, forage and range resources of the State of Montana.

#### OBJECTIVES

Supervise and coordinate the formation and operation of the various grazing districts incorporated under the Grass Conservation Act.

Assist in carrying out the intent of the Grass Conservation Act of 1939.

#### ACHIEVEMENTS

Audits have been completed for all Montana grazing districts, revealing sound financial conditions.

Close cooperation of the grazing districts with the Montana Rangeland Resources Program has been encouraged, and significant contributions have been made toward the Program's success.

Three area information meetings have been held to acquaint districts with their position in the reorganization of State government and to update their programs.

Wider dissemination of the viewpoints of grazing districts is now possible. Grazing districts are represented by two members on the newly formed Resource Conservation Advisory Council, and legislation has been passed which allows for directors of grazing districts to be appointed to County Planning Boards.

Active interest on the part of districts in land use planning, urban and rural relations and national legislation has been promoted.



## PROGRAM DESCRIPTION

### PROGRAM -- CONSERVATION DISTRICT SUPERVISION

#### GOAL

Foster development and proper management of land through soil and water conservation districts and their cooperators, as provided in the State Conservation Districts Law.

#### OBJECTIVES

Provide such assistance and supervision as may be appropriate to the supervisors of soil and water conservation districts.

Apprise the supervisors of each district of the activities and experiences of all other districts.

Coordinate programs of various districts insofar as this may be done by advice and consultation.

Secure the cooperation and assistance of federal and State agencies in the work of districts.

Disseminate information throughout the State concerning the activities and programs of soil conservation districts.

#### ACHIEVEMENTS

Through performance of regularly assigned duties, services were provided to soil and water conservation districts under whose programs Montanans invested over \$13 million in land and water improvements, representing a variety of practices.

Workshops were held with each of the 58 boards of supervisors to confer and advise on individual conservation programs and related problems.



## PROGRAM DESCRIPTION

### PROGRAM -- WATERSHED PLANNING

#### GOAL

Enhance overall economic, environmental and social well-being through water and related resource development under Public Law 566, the Watershed Protection and Flood Prevention Act, which is administered by the Soil Conservation Service, U.S. Department of Agriculture.

#### OBJECTIVES

Encourage multi-purpose water development projects which will provide flood control and prevention, agricultural and municipal storage, irrigation and drainage, improved water management, and recreational and wildlife benefits.

Process watershed project applications under P.L. 566 as rapidly as possible.

Review and assist in any way appropriate as approved projects move toward construction and completion.

Provide State funds in order to obtain matching federal funds for water development projects.

#### ACHIEVEMENTS

Two applications, concerning the Fort Benton Watershed in Chouteau County and the Cottonwood Creek Watershed in Powell County, were received and recommended to the Soil Conservation Service.

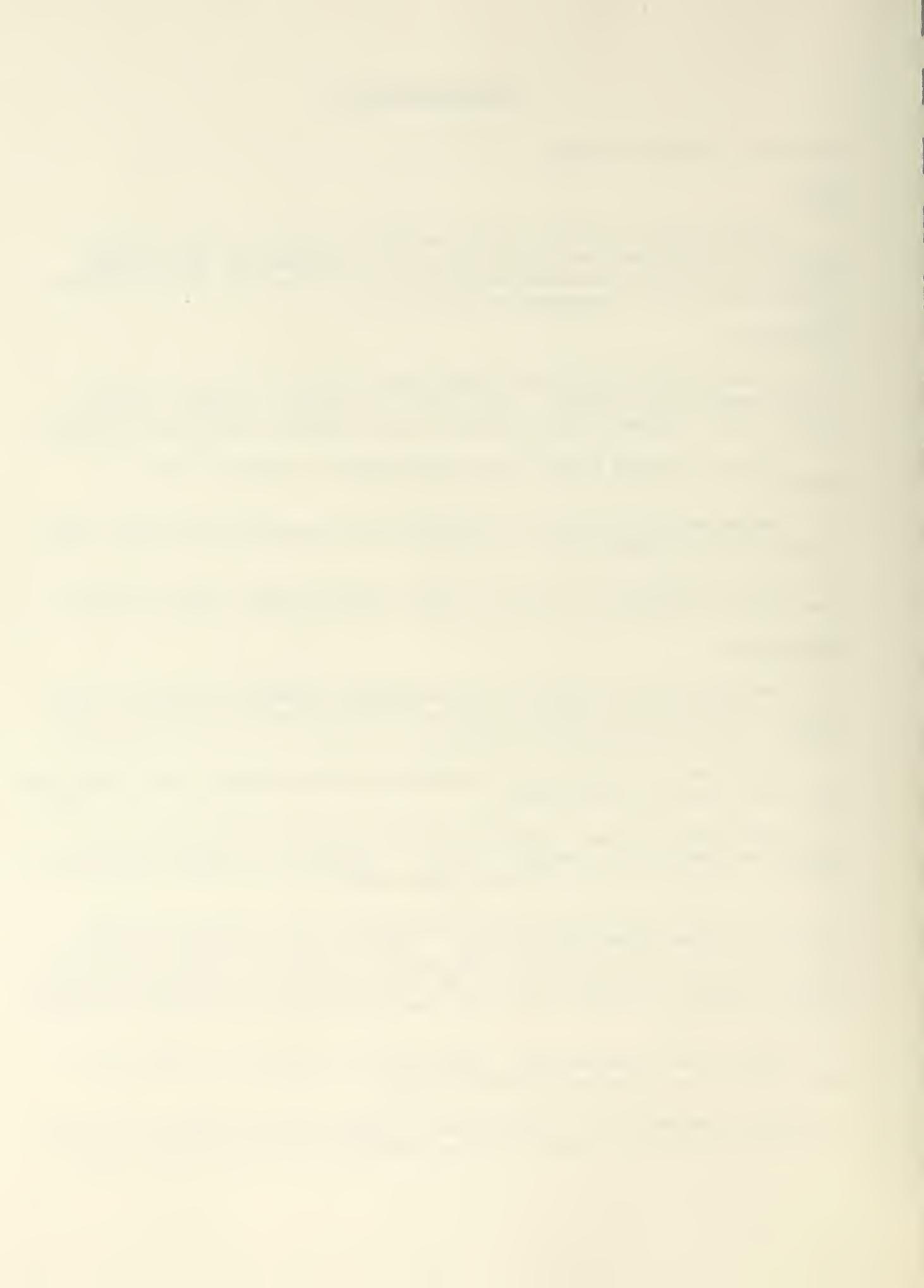
Preliminary investigations are underway on seven projects, and planning has been authorized for four projects.

Construction has been authorized for two projects, Carbon Hills (Custer County) and Newlan Creek (Meagher County). Sponsors of the latter project have obtained an FHA loan and are securing land rights.

Construction work continued on two projects, Big Spring Creek (Fergus County) and Beaver Creek (Hill County). In the former, construction activities on the Mill Ditch were essentially completed, and work was started on the East Fork and Hanson Creek dam sites. In the latter, earth work on the multi-purpose dam was generally completed, with only some concrete work, vegetation and rip-rapping to be done.

Construction activities were completed on one project, the Sidney Water Users' Association Watershed (Richland County).

Funds expended on P.L. 566 projects in Fiscal Year 1973 totaled \$1,393,671, of which \$1,112,703 was federal funds and \$280,968 was State and local funds.



## PROGRAM DESCRIPTION

### PROGRAM -- RANGELAND MANAGEMENT

#### GOAL

Maximize the social, economic and environmental benefits to be derived from Montana's rangeland resource, including livestock forage, wildlife habitat, water conservation, pollution and erosion control, natural beauty, recreation, community development, and tax base improvement.

#### OBJECTIVES

Promote an awareness of rangeland as a resource and of the capability for management of that resource.

Develop, implement and keep current a State rangeland resource plan to effectively utilize and increase the present competencies and resources of individuals, organizations and agencies with range resource responsibilities.

Guide, encourage and coordinate rangeland management efforts among State agencies, federal agencies, and the private sector.

Obtain planning assistance, finances and management expertise for individuals and organizations concerned with rangeland programs.

#### ACHIEVEMENTS

County Rangeland Leaders and/or Committees have been appointed and management programs implemented in all 56 counties.

A suggested list of projects has been developed and distributed to each county, and many of the recommended projects have been completed.

Extensive and pertinent range management information has been distributed to County Rangeland Leaders and other interested individuals.

Over 20 range tours and schools have been conducted. A youth range school was held in Glendive with excellent participation by over 50 young people.

Six regional conferences were held with County Rangeland Leaders with over 90% participation.

A conference was held with the members of the Department of Health and Environmental Sciences, followed by a tour of local range sites.

A third edition of Montana Rangeland Resource Program has been published.

A slide presentation was developed demonstrating the importance of rangelands and of reclaiming strip mined sites to rangeland conditions.



## PROGRAM DESCRIPTION

### PROGRAM -- WATER ENGINEERING

#### GOAL

Enhance beneficial utilization of water, environmental quality, and the safety and economic well-being of Montanans through professional engineering projects and through services provided to related water-oriented programs.

#### OBJECTIVES

Evaluate repair needs and the economic feasibility of continued State involvement in water development project activity.

Assist Water Users' Associations in operation and maintenance of water development projects, approve annual budgets, participate in annual meetings, inspect and make recommendations for repair or replacement of major components of projects, and provide engineering services, including plans, specifications and construction inspections, as needed.

Carry out or supervise construction work contracts on water projects.

Collect stream and canal flow rate measurements required for project operation and State water planning.

Work toward abatement of water quality problems caused by acid drainage from abandoned mines.

Provide assistance for water planning activities.

Establish a dam-safety program.

#### ACHIEVEMENTS

##### Water Development Projects

Construction on the Little Dry, Daly Ditches, Sidney and Columbus Projects involved total expenditures of over \$400,000 during Fiscal Year 1973.

With the conclusion of canal construction, the Little Dry Project was completed. The work on the Daly Ditches Project, consisting of replacing the Winters Flume with a contour ditch and repairing considerable flood damage, was part of a complete rehabilitation effort. The work on the Sidney and Columbus Projects, including irrigation pump installation and canal construction in the former instance and canal lining in the latter, was a continuation of work begun in previous years.

Evaluation of repair needs and economic feasibility of continued State activity in various water development projects continued. Critique of the



Broadwater-Missouri Irrigation Project, a detailed assessment of the project's economic and physical condition, and Progress Report-Project Critiques, a critique summary describing certain features of all major projects, were published. A structure repair and replacement program has been prepared for the Daly Ditches Project, and an economic evaluation of this program is in progress.

Inspections were completed on all major dams and several major water delivery structures owned by the State and administered by the Department of Natural Resources and Conservation.

### Hydrography

The Department of Fish and Game was provided numerous stream flow measurements which will be used to determine the optimum stream flow for fisheries on all major live streams in the State.

49 gaging stations in connection with State-owned irrigation projects were operated and maintained on streams and canals throughout the normal irrigation season.

A cooperative agreement was entered into with the U.S. Geological Survey for the maintenance of several additional water measurement stations throughout the State. The agreement also provides for special service and groundwater investigations.

### Engineering Studies

Engineering investigations on the feasibility of constructing a pipeline for delivery of rural domestic water were completed for a project involving 18 ranches south of Chester, Montana, and design of the pipeline system was begun.

Preliminary investigations of the feasibility of utilizing the abandoned ABM pipeline east of Conrad for delivery of rural domestic water were concluded.

Two pre-feasibility reports and grant applications were submitted to the Environmental Protection Agency on proposed studies of acid mine drainage abatement systems near Hughesville and Cooke City. The Hughesville proposal was approved, the \$33,000 grant received, and preliminary work begun. Notification of approval of the Cooke City study was received.

The development of an inventory of over 1,500 dams and reservoirs in the State was initiated with funding assistance from the U.S. Army Corps of Engineers.

### Water Rights

Preparations and staffing adjustments were made to facilitate the creation of a new organizational unit, the Water Rights Bureau, in order for the Department to fulfill its responsibilities in administering the Montana Water Use Act of 1973, which became effective on July 1, 1973.



Appropriate rules and regulations for implementation of the Montana Water Use Act were formulated, presented to the Board of Natural Resources and Conservation, and adopted.

Of the various forms required for implementation of the Montana Water Use Act, seven were developed, printed and made available for public use, and eight were developed in the draft stage.

Orderly procedures and methods, to be followed by the Department in carrying out the duties and responsibilities delegated by the Montana Water Use Act, were developed.

Approximately 2,400 Ground Water Appropriations were processed under the provisions of the 1962 Ground Water Act.

#### Floodplain Management

A detailed floodplain delineation study for the entire East Gallatin drainage was completed in cooperation with the Soil Conservation Service.

Field surveys for floodplain delineations of portions of Rock Creek near Missoula and the Bitterroot River near Hamilton were completed in cooperation with the U.S. Geological Survey.

Floodplain studies were initiated for Sand Coulee Creek, the Yellowstone River through Livingston, the Beaverhead River near Dillon, Rock Creek near Red Lodge, and the Clark Fork River near Missoula.

Preparations were made to facilitate the creation of a new organizational unit, the Floodway Management Bureau, in order for the Department to fulfill its responsibilities in administering the amended Floodway Management and Regulation Act.

Proposed rules and regulations were formulated for the regulation of development within the encroachment line of floods of 100-year frequency, and a public hearing was held thereon on June 14, 1973.



## PROGRAM DESCRIPTION

### PROGRAM -- WATER RESOURCES AND PLANNING

#### GOAL

Identify and enable full utilization of Montana's water and related land resources, thereby helping to secure maximum economic and social prosperity for State residents and assisting in preventing the diversion of Montana's waters to other areas of the nation.

#### OBJECTIVES

Collect, compile and analyse water and related land resources data.

Project future water requirements and anticipate water problems.

Progressively formulate a comprehensive, coordinated multiple-use water resources plan, including alternatives and proposed methods of implementation, for the optimum beneficial utilization of the State's surface and ground-water resources, recognizing all beneficial uses.

Secure, through the water resources survey, and make available to the public and the courts, complete information on water rights and their use in applying water to irrigated lands.

#### ACHIEVEMENTS

The cooperative regional framework studies in the Columbia River Basin in western Montana and the Missouri River Basin in eastern Montana were reviewed and adoption recommended.

Participation continued with the U.S. Department of the Interior and other federal agencies in developing the Western U.S. Water Plan. Input from other State agencies was coordinated.

Cooperation continued in the Type IV planning effort on the Clark Fork of the Columbia with other State agencies and the U.S. Department of Agriculture.

A major planning effort on the Flathead Basin, in cooperation with the Pacific Northwest River Basins Commission and other federal and State agencies, was coordinated, and a public involvement program was initiated to ensure local input.

Cooperative planning with Wyoming and the U.S. Department of Agriculture continued on the Wind-Bighorn-Clarks Fork River Basins in southcentral Montana.

In compliance with House Resolution No.24 of the 42nd Legislature, the siltation study of the Clarks Fork of the Yellowstone River was completed in cooperation with other State and federal agencies, and A Study of Erosion and Sedimentation, Montana Portion, Clarks Fork, Yellowstone River Basin was published.



Partial funding was provided for a cooperative study with the Department of Fish and Game to determine instream flow requirement criteria.

The inventory of potentially irrigable lands throughout the State continued with emphasis given the Yellowstone Basin.

Much of the data necessary for publication of an Inventory of Water Use has been collected.

Work has begun toward publication of a Framework Study Report, which will be a statewide overview of Montana's water resources, problems, needs, alternative solutions and recommendations.

Data on water and related resources were gathered, and The Madison River Basin, A Resource Review was published, illustrating the range of possible management alternatives and contributing to the State Water Plan.

In connection with the county resource surveys, the Missoula County report was prepared for reprinting, work was begun toward publication of the Fergus County report, and field survey work continued in Beaverhead County.



## PROGRAM DESCRIPTION

### PROGRAM -- FOREST MANAGEMENT

#### GOAL

Promulgate good resource management on all State and private forest lands, thereby providing the State with a continuing valuable economic resource without jeopardizing the productivity of the land.

#### OBJECTIVES

Conduct a planned management program on State forest land which will provide maximum income to several State school funds on a sustained basis.

Produce and distribute seedling trees for aforestation and reforestation on State and private forest lands, farm and ranch windbreaks, and shelterbelts.

Provide technical and practical advice to private woodland owners concerning soil and forest conservation.

Adopt measures to control, suppress, and eradicate outbreaks of forest insect pests and tree diseases.

Assist the small producers of forest products to find markets for their products, and assist manufacturers to find sources of supply.

#### ACHIEVEMENTS

The Forestry Division sold 3,634 M board feet of lumber during Fiscal Year 1973, compared to 3,200 M board feet during Fiscal Year 1972.

34 insect surveys were conducted on nearly 4 million acres.

44 forestry exhibits were displayed, reaching over 700,000 persons.

Over 1 million trees were sold under the Nursery Program.

A multiple-use plan was developed for the Swan River State Forest. Incorporating the results of several years' training, expertise from various disciplines, and input from the public, this plan emphasizes forest land quality and can serve as a prototype for plans on other State-owned forest lands.



## PROGRAM DESCRIPTION

### PROGRAM -- FIRE PROTECTION

#### GOAL

Obtain economical, efficient and acceptable protection from fire damage to State and private forest lands and non-forest watershed lands.

#### OBJECTIVES

Assist the counties in the protection of State, county and private lands by providing training and equipment, furnishing fire suppression leadership, helping develop county fire plans, and supplying material and financial assistance during major fires.

Coordinate the efforts of private, State and federal fire control agencies in the protection of State and privately owned forest lands.

Encourage complete utilization of the tree during harvest operations to reduce potential fuel hazards.

Perfect techniques and procedures of fuel reduction that minimize air pollution.

#### ACHIEVEMENTS

During the fire season 420 fires were controlled. The acreage burned was limited to 1,241 acres, or an average of 2.95 acres per fire.

Fire protection was provided directly to 8,315,000 acres and to an additional 13 million acres of wild land in cooperation with 17 counties. A total of over 21 million acres is involved in this program.

County fire plans, including identification of needs for fire fighting equipment, were developed or revised for 17 counties.

More than 20 fire fighting units were constructed from excess military equipment and distributed to cooperating counties.

A high band radio system was installed in the southwest area, replacing an old radio system largely inherited from the Blackfoot Fire Protection Association.



## PROGRAM DESCRIPTION

### PROGRAM -- INSTITUTION FORESTRY WORK PROGRAM

#### GOAL

Assist the Department of Institutions in the rehabilitation of juvenile delinquents through a program of supervised work on State forest lands.

#### OBJECTIVES

Provide practical work experience and work habits to the students at the Swan River Youth Camp.

Perform valuable work such as suppressing fires, thinning timber, planting trees, and other projects.

#### ACHIEVEMENTS

3,298 man-days were expended by the students at the Swan River Youth Camp on various work projects for the Forestry Division. The value of projects completed by the Camp amounted to approximately \$49,000. This compares to 2,434 man-days expended at an estimated value of \$26,998 in Fiscal Year 1972.

Some of the more significant project accomplishments and their estimated values were:

General Landscaping Work - \$4,050  
Work on Helena Forester's Dispatch Center - \$5,000  
General Building Maintenance - \$3,710  
Bridge Repair Work - \$2,390  
Work on the Forestry Division Residence Building,  
Located at Sperry Grade on the Blackfoot River - \$6,000

The rehabilitation and self-development of the students were assisted through counseling, training in the use of certain tools and equipment, helping in the development of good work habits, and encouraging the assumption of individual responsibilities.



## PROGRAM DESCRIPTION

### PROGRAM -- EMERGENCY EMPLOYMENT ACT

#### GOAL

Provide employment to qualifying persons in job areas which will lead to employment or training not supported under the Emergency Employment Act, thereby easing the impact of unemployment and reducing economic pressures which tend to generate further unemployment.

#### OBJECTIVES

Obtain services valuable to the Department.

Provide training and work experiences to enhance the employability of individuals.

Place qualified individuals into new and/or vacant positions with the Department.

#### ACHIEVEMENTS

During Fiscal Year 1973, the Department of Natural Resources and Conservation employed 30 individuals under the Emergency Employment Program. It is anticipated that several of these individuals will be able to fill new and vacant positions elsewhere in the Department.



## PROGRAM DESCRIPTION

### PROGRAM -- ENERGY PLANNING

#### GOAL

Ensure that the location, construction and operation of generation and conversion plants including their associated facilities and transmission lines produce minimal adverse effects on the people and the environment, through administration of the Montana Utility Siting Act of 1973.

#### OBJECTIVES

Conduct and coordinate intensive studies of the need for and probable environmental, social and economic impacts of proposed facilities.

Furnish reports and recommendations to the Board of Natural Resources and Conservation concerning pre-construction certification of proposed facilities.

Monitor the construction and operation of certificated facilities in order to assure compliance with terms of individual certificates and the Montana Utility Siting Act, and to discover and prevent non-compliance.

Examine and evaluate sites upon which construction is proposed within five years to determine potential undue impairment of environmental values.

Evaluate long-range plans of utilities.

Inform the public regarding utility planning and encourage citizen involvement in siting evaluations.

Formulate appropriate rules and regulations to be adopted for implementation of the Montana Utility Siting Act.

#### ACHIEVEMENTS

A new organizational unit was created in order for the Department to fulfill its responsibility in administering the Montana Utility Siting Act, which became effective with Governor Judge's signature on March 16, 1973. The Division of Energy Planning was therefore established, and staffing has been partially completed.

A contract was entered into for an environmental analysis regarding two proposed 100 KV transmission lines, one extending approximately 25 miles between Laurel and Bridger, and the other extending approximately 22 miles between the Laurel Auto Substation and the Billings 8th Street Substation.







An environmental evaluation was completed and approval recommended for the proposed relocation of certain pole structures of the 161 KV Billings-Yellowtail transmission line.

Coal, gas, oil and electric companies were notified of the provisions of the Montana Utility Siting Act and reminded of the necessity to file long-range (10 year) plans.

Meetings were held with Westinghouse, Montana Power Company and various State agencies to coordinate and initiate studies regarding the two proposed 700 megawatt generating facilities, Colstrip #3 and #4, in Rosebud County. Contract negotiations were begun for the following studies:

<u>AGENCY</u>	<u>SCOPE OF STUDY</u>	<u>APPROXIMATE VALUE</u>
Department of Health and Environmental Sciences	Baseline data on air quality	121,237.00
Department of Health and Environmental Sciences	Baseline data on radiation in biota, air, water, soil and coal	27,100.00
Department of Fish and Game	Impacts on wildlife, aquatic biota, wildlife habitat and recreation	46,000.00
Department of Inter-governmental Relations	Impact on community services	32,000.00
University of Montana Foundation	Baseline data on sulfate ion, nitrate ion, fluoride and trace metals	30,928.00



MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

OIL AND GAS CONSERVATION DIVISION

ANNUAL REPORT

For The

Fiscal Year Ended

June 30, 1973



*ATTACHED FOR ADAM PURPOSE ONLY*

PRINCIPAL OFFICERS AND OFFICES  
BOARD OF OIL & GAS CONSERVATION

Richard A. Campbell, Chairman  
1222 North 27th Street  
Billings, Montana 59101  
Term: 6/29/72 to 4/1/75

C.J. Iverson, Vice Chairman  
P.O. Box 830  
Shelby, Montana 59474  
Term: 4/1/69 to 4/1/74

Paul C. Bunn  
P.O. Box "C"  
Chester, Montana 59522  
Term: 1/16/73 to 4/16/76

John P. Moore  
P.O. Box 997  
Cut Bank, Montana 59427  
Term: 5/29/73 to 1/3/77

Milton G. Anderson  
P.O. Box 73  
Sidney, Montana 59270  
Term: 5/29/73 to 1/3/77

Division Administrator: Donald E. Chisholm

Offices:

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Helena, Montana 59601

15 Poly Drive  
Billings, Montana 59101

218 Main Street  
Shelby, Montana 59474

LEGAL REFERENCES

Title 60, Chapter 1 Conservation of Oil and Gas

Title 60, Chapter 8 Underground Gas Storage Reservoirs



## PROGRAM DESCRIPTION

### PROGRAM -- OIL AND GAS REGULATION

#### GOAL

Prevent wasteful or harmful practices in the recovery of oil and gas resources.

#### OBJECTIVES

Provide efficient administrative and technical support to the Board of Oil and Gas Conservation.

Identify ownership of oil and gas wells.

Require a performance bond from all operators to assure conformance with the Board's rules and regulations.

Regulate the drilling, casing, producing, plugging and abandonment of wells.

Safeguard against the pollution of fresh water.

Regulate disposal of produced water and oil field waste.

Promulgate and enforce rules and regulations with regard to oil and gas resource development.

Maintain data files on all wells and fields in the State and of public hearings held by the Board.

#### ACHIEVEMENTS

Unitization of the Bullhook area of the Tiger Ridge Gas Field in central northern Montana was approved. Thus, in December 1972, the Northern Natural Gas Transmission Company began operation of a gas pipe line from the field which resulted in nearly doubling Montana's daily average natural gas production. Two other smaller gas fields were approved for unitization during Fiscal Year 1973.

The instigation of secondary recovery programs was approved in six fields. During Fiscal Year 1973 state-wide daily oil production has increased by 1,200 barrels over that in Fiscal Year 1972. This increase is due primarily to successfully operated secondary recovery programs.

Two bills sponsored were passed by the 1973 Legislature:

1. Providing for an increase in the privilege and license taxes which are used to fund the Oil and Gas Conservation Board. The new tax rate will permit the Board to maintain the quality and volume of its present services to the State.



2. Providing for the closing of a loop-hole in the law whereby operators could withhold from the State samples and cores from wells drilled to 1,000 feet or less in depth.

Four new oil fields and one new gas field were delineated and rules established therefor.

Drill cuttings and core samples from over 630 wells were collected, processed and stored in the depository in Billings. These samples and cores are studied extensively by State and federal agencies and by industry as an aid in the exploration for oil and gas in Montana.

Assistance was provided to the Montana Geological Society in the execution of a geological field conference in Montana which attracted 170 geologists from throughout the nation and Canada.

The volume was expanded and the quality improved of the microfilm data retrieval system concerning oil and gas exploration in Montana. Copies of this information are now available for study in the cities of Houston, Dallas, Denver, Salt Lake City and Calgary in addition to the Board's offices in Billings and Shelby, Montana.





